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5. It thus appeared that in the strange cycle of being the whale is dependent on the diatom for its existence. "In conclusion, you will allow me to remark," said Mr. Brown, "that I know nothing stranger in all the annals of biology than the strange tale I have unfolded. Protozoon feeding diatom, diatom feeding entomostrakon, and entomostrakon the whale; in a word, that the most gigantic of living animals,\* whose pursuit affords occupation to thousands of tons of shipping, and thousands of seamen, and whose loss to one little Scottish port was last year estimated at £100,000,† is dependent for its existence on a being so small that it takes hundreds to be massed together before they can be visible to the naked eye, and so insignificant that it is unknown to the men who are most interested in its existence—telling how great are little things. The author gave some of the illustrations of representative species afforded by his discoveries, and we may look for further details on the publication of the paper in a few weeks.—*Land and Water*.

WANTED, A ROTIFER.—I have hunted gutters, cisterns, pools, ponds, lakes, ditches, and rivers, and viewed many a "field" alive with wondrous forms of beauty, both animal and vegetable, yet never a Rotifer have I found or seen. I have searched with high powers and low powers, but all in vain. It is true my hunting ground (or water) has been confined to latitude 39°, west longitude 94°-96°, and it may be the object of my search is not an inhabitant of this part of the world. But will some of your correspondents kindly send me a Rotifer if they can find one? I will reciprocate with anything I can find.—W. H. R. L., *Box 400, Kansas City, Missouri*.

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## PROCEEDINGS OF SCIENTIFIC SOCIETIES.

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AMERICAN ASSOCIATION FOR THE ADVANCEMENT OF SCIENCE.—The Seventeenth Annual Meeting of the American Association for the Advancement of Science was held August 5-12, at Chicago, Ill. About two hundred and fifty members were present, and upwards of one hundred and fifty papers were presented. We give below the titles of those read in the Natural History Section. During and after the meeting, free excursion tickets were issued by the railroads centering in Chicago, and many of the members availed themselves of the liberality of the Companies to make excursions to Lake Superior, Omaha, La Salle, Dubuque, Galena, and other places of interest. These, with an excursion for an afternoon on the lake, and the brilliant evening entertainments given by prominent citizens

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\* Nelson, in his "Skandanavieske Faune," vol. i., gives the weight of the full-grown *Balæna mysticetus* at 100 tons, or 220,000 lbs., equal to 88 elephants, or 442 Polar bears!

† In 1867, the twelve screw steamers of Dundee obtained only two whales amongst them, and it was estimated that the loss to each steamer was £5,000, and the loss to the town was assessed at the figure given.

of Chicago, and the unusual interest and vigor of the meeting, which was largely attended through the entire session, rendered it a brilliant success. The American Association is young and vigorous; it is a practical necessity in this country, and the generous pecuniary support and ready sympathy in its objects given by the communities in which it annually meets, are evidences of the popular interest in the cultivation of the Natural and Physical Sciences.

Officers of the Meeting: Dr. B. A. GOULD, *President*; Col. CHARLES WHITTLESEY, *Vice President*; Prof. JOSEPH LOVERING, *Permanent Secretary*; Prof. A. P. ROCKWELL, *General Secretary*; Dr. A. L. ELWYN, *Treasurer*; Of Section B (Natural History), Prof. J. D. WHITNEY, *Chairman*; Prof. E. D. COPE, *Secretary*; MESSRS. WORTHEN, MARSH, and GILL, *Committee*.

#### PAPERS READ IN THE NATURAL HISTORY SECTION.

Geological Section of Ohio. By *E. B. Andrews*.

On the Plasticity of Rocks, and origin of the Structure of the so-called Grave Stone Slates of California.—On the Gradual Dessication of the Western Portions of North America.—Vestiges of Pre-historic Races in California.—On some of the Causes which affect the Rapidity of Erosion of Rocks and of River Valleys. By *W. P. Blake*.

Effect of Atmospheric Changes on the Eruptions of the great Geyser of Iceland. By *P. A. Chadbourne*.

On a Genus of Extinct Sea-Saurians (*Elasmosaurus*). By *Edward D. Cope*.

On the Formation consisting of Shells and Belemnites, and Phosphates of Iron at Mulica Hill, Gloucester County, N. J. By *A. B. Engstrom*.

On the Boulder Field in Cedar County, Iowa. By *Rush Emery*.

Origin of the Prairies.—Exhibition of the Crania of *Bootherium* and *Castoroides*, with Remarks on their Geological Position and their Living Analogues.—The Antiquity of Man in North America.—On the Occurrence of Fluor Spar in Southern Illinois.—On the Refrigeration of Continents.—On the Occurrence of Tin in Missouri. By *J. W. Foster*.

Meteorites from Mexico and Poland. By *Lewis Feuchtwanger*.

On Elasmognathus and its Relations to the Tapiridae generally.—On the Classification and Relations of Seals. By *Theodore Gill*.

On the Artistic Evidence of the Remote Colonization of the North-western or American Continent by Maritime People of Distinct Nationalities before the Modern Era. By *J. H. Gibbon*.

Report on Archaeology and Ethnology.—Archæology and Ethnology of the Mississippi Valley. By *W. De Hass*.

On the Geology of the Mississippi Delta, and the Salt Deposit of Petite Anse. By *Eugene W. Hilgard*.

The Importance of the Submarine Aleutian Chain as a Geostatic and Geographical Feature.—The Hermaphroditism of Fungi ascertained.—The Coniferæ ascertained to be Thalline: their Phase, Development, Circuit, and Generation.—Spermatic Phenomena.—The Paludal Endogens a Class intermediate between Endogens and Exogens.—The Vertebral Type of the Cranium a Quinary one.—Extremities of the Skeleton typically five.—Anatomical Distinction of Vegetable Structure, etc. By *T. C. Hilgard*.

The Quebec Group in Northern New Hampshire.—The Supposed Triassic Foot-marks in Kansas. By *C. H. Hitchcock*.

Farther Notice of Experiments on Snow and Ice at a Temperature below 32° F. By *Edward Hungerford*.

Glaciers as extensive and constant geologic Agencies.—Points in the Geology of Hudson River.—Brief Remarks on the Botany, Meteorology, and Geology of Mount Mansfield, Vermont.—Habits and Peculiarities of Plants in South-eastern New York and Vicinity.—Movements in Stratified Rocks since the Glacial Epoch. By *James Hyatt*.

On Gold in the Laurentian Rocks of Canada.—On the Gold Region of Nova Scotia.—On the Upper Silurian and Devonian Rocks of Ohio.—On Some Points in the Geology of Vermont. By *T. S. Hunt*.

Source of Muscular Power.—Relations of the Metamorphoses of the Phosphates to Waste and Repair.—Fluorine a Constituent of the Brain. By *E. N. Horsford*.

Superficial Geology of the Lake Shore near Chicago. By *J. S. Jewell*.

Sketch of the Topography, Geology, and Antiquities of the Caucasus. By *F. Von Koschak*.

The Periodic Law in the Failure of Harvests and Inundations, with Suggestions as to their Insurance. By *George A. Leakin*.

On the Leaves of Coniferous Plants. By *Thomas Meehan*.

Bibliography of Entomology in the United States and Canada, since 1862. By *John G. Morris*.

The Darwinian Theory of Development. By *Charles Moran*.

Description of a New Species of *Protichnites* from the Potsdam Sandstone of New York. — Notice of Some New Vertebrate Remains from the Tertiary of New Jersey. — On the Preservation of Color in Fossils from Palæozoic Formations. By *O. C. Marsh*.

Migrations of the Indian Family. By *L. H. Morgan*.

On Two New Fossil Trees, the oldest known, found by Rev. H. Herzer, in the Devonian Rocks of Ohio. — On the Physical Geography of the Continent of North America during the different Geological Periods. — On the Transportation of the Materials forming the Carboniferous Conglomerates. — On the Surface Geology of the Basin of the Great Lakes and the Upper Mississippi Valley. By *J. S. Newberry*.

On the Archæological Value of Certain Ancient Beads. By *L. G. Olmstead*.

The Habitable Features of the North American Continental Plateau near the Line of 35° Parallel North Latitude; containing a General Summary of Conclusions derived from a Review of its Aboriginal Population and Natural Features. By *C. C. Parry*.

On the Structure and Aqueous Origin of Gold-bearing Mineral Veins. — On the Occurrence of the Mastodon in the Deep-lying Gold Placers of California. By *Benjamin Silliman*.

Law of the Earth. — New Geological Study. By *P. E. Trastour*.

Phases of Glacial Action in Maine at the Close of the Drift Period. By *N. T. True*.

The Distortions of Pebbles in Conglomerate at Rangley, Maine. By *G. L. Vose*.

On the Old Lake Beds of the Prairie Region. By *S. J. Wallace*.

On the Stratigraphical Relations of the Fossil Horse in the United States. — Abstract of the Geological Evidences of Man's Antiquity in the United States. By *Charles Whittlesey*.

On the Progress and Present Condition of the Geological Survey of California. — The Fossil Human Skull of Calaveras County, California. Some Points in the Surface Geology of the Western Side of the American Continent. — The Yosemite Valley. By *J. D. Whitney*.

Geological Age and Equivalents of the Marshall Group. Part I, Stratigraphical Considerations; Part II, Palæontological Considerations. — On the Secular Recurrence of Identical Petrogenetic Conditions. — Exhibition of a New Geological Chart. — Exhibition of a New Label Holder for Zoological Specimens. — On some Points in Geological Nomenclature. By *A. Winchell*.

Geodes. — Modern Discoveries in Palestine. By *W. W. Williams*.

Announcement of the Discovery of Cretaceous Rocks in Guthrie County, Iowa. — Remarks upon the Red-quartzite Boulders and their Original Ledges *in situ* in Northwestern Iowa, Eastern Dakota, and South-western Minnesota. By *C. A. White*.

Fuel Resources of Illinois. — Fossil Fishes, Insects, Crustacea, etc., of the Coal Measures of Grundy County, Illinois. By *A. H. Worthen*.

On Certain Physical Features of the Mississippi River. By *G. K. Warren*.

Supplementary Notes on Gold-Genesis. — Some New Facts and Views concerning Aluminum. — Upon the Ammonoosac Gold Field in New Hampshire. — Studies of the Red Sand Stones of the Atlantic Slopes, and their enclosed Igneous Masses. — Note upon the *Palæotrochis*. By *Henry Wurtz*.

Col. WHITTLESEY gave the following data regarding the Antiquity of Man in the United States. 1. Refuse shell-heaps of the Atlantic Coast, from Nova Scotia to Florida. Age not determined, but not very great. 2. Flint arrow-heads beneath Mr. Koch's skeleton of the mastodon in a peat layer, covered by alluvium fifteen feet deep, at Pomme de Terre River, Missouri. 3. A flint knife at Grinnel Leads, Kansas, found by P. A. Scott, at a depth of fourteen feet, in gravel and clay. 4. Three human skeletons of Indians, in a shelter cave at Elgin, Ohio; estimated age two thousand years. 5. A log worn by the feet of man, probably Indians, in the muck bed at High Rock Spring, Saratoga Springs, N. Y., at a depth of nine feet beneath the cone, estimated by Dr. Grier to be 4,840 years old. 6. Copper spear-heads and other implements with human skeletons, apparently of the mound builders, at a depth of fourteen feet, at Brockville, Canada; found by Dr. J. Reynolds. 7. Several human skeletons in a cave near Louisville, Ky., with stone and flint implements; by J. N. Scowden. 8. Pottery found by Dr. Holmes, associated with remains of the mastodon and megatherium, at Charleston, S. C. 9. A human jaw, teeth, and other bones, in quarternary conglomerate at Florida, estimated

by Agassiz at 10,000 years. 10. Fire-hearths, found by C. Whittlesey, in the ancient alluvium of the Ohio, at Portsmouth, Ohio, at a depth of twenty feet, and beneath the works of the mound builders. 11. Skeletons of Indians, reported by Dr. Dowler, of New Orleans, at a depth of sixteen feet in the alluvium, estimated by him at 50,000 years; by others as low as 15,000. 12. Portion of a pelvic bone of man, at Natchez, Miss., associated with the mastodon, megalonyx, and horse, supposed to be in the loess, but of doubtful authority. 13. Human skull and other relics, Calaveras county, California, at a depth of 150 feet in superficial materials, containing gold; reported by Professor J. D. Whitney.

In the discussion on the Antiquity of Man, Mr. J. W. FOSTER assigned the ancient Peruvians to the Bronze age, attributing to them a commercial intercourse with foreign lands; copper instruments having been discovered which may have come from the Copper Mines of Lake Superior, and of mica, which may have been brought from New England. He also mentioned that the mound builders wove cloth spun with an uniform thread, and woven with a warp and woof.

Professor W. P. BLAKE stated that the evidences of an ancient race were frequent in California. The miners in sluicing the beds of the ancient streams find frequently spear and arrow-heads of stone, which testify to the skill of humanity, as well as that they are not the work of a race now known. Among the first of these evidences discovered, were some human molar teeth associated with gold in the stratum of auriferous drift, at a depth of fifteen or twenty feet. He did not see these in their place, but he did not doubt the truth of their being so found. Implements of stone, too, are found from time to time in the gold drift, and within two or three years bones of a skull itself had been so found. Two years since one side bone of a skull was found. It was taken from the end of a tunnel running two hundred feet into the side of a mountain. The fragment was fresh in appearance and unchanged by any solution; the surface was bright, the sutures worn round and closely filled with gravel and fragments of minerals, such as were to be found in the gold drift. The conviction was forced upon him, by an examination, that it was really a portion of a skull, as it was said, and that it had for ages, perhaps, rolled in the drift. Stone implements are found in various parts of the State, but more frequently in the central portions, and more especially in the region of Colombia, Sonora, and along the Table Mountain, the two latter furnishing the finer specimens. In close association with these remains are found relics of the mastodon and the tapir. The Table Mountain he described by diagram. Whereon the mountain now stands was a valley, traversed by a river. Here ages since there commenced a deposit of stone, with gold, pebbles, mud, and sand. Volcanic action had encrusted these with ashes, and at last all had been covered with the lava. As the valley filled up, the water of the river cut on each side of the accumulating mass a channel, commencing at the base of the deposit of lava. In time it washed its way until now the Table Mountain stands erect, and

two valleys are formed, one on either side. This mountain extends with its flat summit for miles, its surface edge being a bold bluff of black appearing rock, with little or no vegetation upon its plane. The thickness of the entire deposit averaged from one to two hundred feet, the height of the lava above the bed of the newly-formed valleys being from one thousand to fifteen hundred feet. The miner, seeking the auriferous deposit, having, by sinking shafts, ascertained the greatest depth of the whole deposit, tunnels from the side of the valley, and this process had brought to light teeth of extinct mammalia as well as relics of human art. He exhibited lithographs to show the nature of some of these last spoken of relics. Among them were two stone objects which he supposed to be shovels used in cooking, by placing them upon or into the burning fuel; a mortar or dish, some instruments resembling plummets, and several spear-heads.

Professor E. D. COPE read a paper on a new and gigantic Sea-Saurian (*Elasmosaurus platyrus*) from the Cretaceous formation of Central Kansas. Preliminary to it he stated that one hundred species of North American extinct reptiles and batrachians were known to him, of which some twenty were yet unpublished. He gave a synopsis of the characters of the *Dinosauria*, showing their nearer affinity to the birds than that presented by the Pterodactyles, in the structure of the pelvis, the tibia, fibula, tarsus, etc. He alluded to the great number of extinct tortoises of the New Jersey Green Sand, and to the first fossil serpent from this country, the *Palæophis littoralis* of the Eocene Tertiary formation of New Jersey.

Professor T. S. HUNT remarked that the borings for oil in the south-western Ontario region, had enabled the Canadian Geological Survey to measure the thickness of these formations. A layer of rock-salt, forty feet thick, had been discovered in the Lower Devonian rocks, and also a deposit of gypsum. This shows a condition of very slight precipitation of moisture, and of very great evaporation at that time. The petroleum was thought to originate in the Lower Devonian limestones. The borings show that the south-west portions of Lakes Erie and St. Clair have been excavated from the Quaternary formation.

Dr. C. A. WHITE announced the discovery of sandstones and conglomerates of the Dakota group of Cretaceous rocks in Guthrie county, Iowa, one locality being forty miles west of the city of Des Moines. Also, that he had traced, step by step, the red quartzite boulders profusely scattered in the drift of Western Iowa, to their original ledges of red quartzite in North-western Iowa, Eastern Dakota, and South-western Minnesota. This quartzite is the same rock which causes the Sioux Falls of the Big Sioux River, and the same which encloses the layer of red pipestone in South-western Minnesota.

Prof. P. A. CHADBOURNE stated in regard to the Effect of Atmospheric Changes on the Eruptions of the Great Geyser of Iceland, that Sir W. Hooker, who visited Iceland in 1809, mentions that eruptions of the Great Geyser most frequently occurred in fair weather, and this is the account

now given by those who live near the geyser. Eruptions do not occur until the water in the bottom of the geyser-pipe is  $266^{\circ}$  F., as shown by Bunsen's observations. The time taken to raise the water in the pipe to  $266^{\circ}$  F. will evidently depend upon the quantity of water poured in a given time through the fissures that feed the pipe. As the water is supplied by the hills near the geysers, a fall of rain readily affects the quantity of water flowing through the pipe. The greater the quantity, the greater will be the time between the eruptions. If the quantity of cold water poured into the pipe were so great that the bottom of the pipe could never rise to a temperature of  $266^{\circ}$  F., there could be no eruptions. It is from the enlarging of the water channels by earthquakes, so as to pour in more water, that some geysers that were formerly active have now become quiet.

In discussing the remarks of Mr. RUSH EMERY "On the Boulder-field in Cedar County, Iowa," Dr. C. A. WHITE and Professor WINCHELL stated that there were some evidences of a northward distribution of boulders in Iowa and Michigan.

Col. J. W. FOSTER alluded to the large size of the *Castoroides*, or fossil beaver, adopting the view of Professor E. D. COPE, that it must have been nearly as large as the grizzly bear.

Col. C. WHITTLESEY enumerated the localities and geological age of the deposits in which remains of the horse had been found. Professor E. D. COPE insisted that though no difference had been discovered between the teeth of the living and fossil species of horse, yet they may be, and probably were, of entirely different species; the living species having been introduced by Europeans.

Mr. T. MEEHAN thus summed up the results of his studies on the Leaves of Conifers. The true leaves of Coniferæ are usually adnate with the branches. Adnation is in proportion to vigor in the genus, species, or in the individuals of the same species, or branches of the same individuals. Many so called distinct species of Coniferæ are the same; but in various states of adnation.

We shall conclude our notices of the papers read in the next number.

The next meeting of the Association will be held in SALEM, Mass., commencing on Wednesday, August 18, 1869. The following are the Officers for next year: Col. J. W. FOSTER, Chicago, *President*; Prof. OGDEN N. ROOD, New York, *Vice President*; Prof. JOSEPH LOVERING, *Permanent Secretary*; Prof. O. C. MARSH, New Haven, *General Secretary*; Prof. A. L. ELWYN, Philadelphia, *Treasurer*.

ACADEMY OF NATURAL SCIENCES, *Conchological Section*.—*Philadelphia, July 3, 1868*.—Mr. Wm. M. Gabb called attention to the variation in type that takes place in genera during successive geological periods. He remarked that when a genus attains a strong numerical development in species in any one age, those species belonging to other periods, especially those most removed from the chronological centre of development, so to speak, are usually more or less aberrant from the average

typical form of the genus. This is so marked, that the experienced palæontologist can often recognize the geological age of a group of fossils by their *facies*, as it is termed, *i. e.* their general appearance. Nor is this peculiarity confined to the stratigraphical range of genera; it applies also to their geographical distribution, as every working naturalist knows and practically admits constantly in his studies.

Mr. Roberts exhibited fine specimens of *Anodonta fluviatilis* Dilw., and *A. implicata* Say, collected in the vicinity of Philadelphia, noted for their enormous size as well as for their numerous deformities, caused undoubtedly by some peculiarity of their locality. Out of a large number of specimens of the genus obtained, but one specimen of *Anodonta Tryonii* Lea was found, showing its great rarity in the vicinity of the original locality.

BOSTON SOCIETY OF NATURAL HISTORY. *Feb.* 26, 1868.—The Secretary read a letter from Dr. Linneecum, of Texas, describing the ravages of the grasshoppers in that State. Last spring the young hatched from the egg in the early days of March; by the middle of the month they had destroyed half the vegetation, although the insects were wingless and not larger than house-flies. The first winged specimens were seen high in the air at about three o'clock in the afternoon; as a light northerly breeze sprang up, millions came whirling down to the earth, covering the ground in an hour, and destroying every green thing with avidity. During the night they were quiet, but at daybreak commenced to eat, and continued until ten in the morning, when they all flew southward. At about three o'clock in the afternoon of the same day another swarm arrived, ten times as numerous as the first; these again took flight the following day; and thus they continued, coming and going, day after day, devouring the foliage and depositing their eggs. At first they selected bare spots for this purpose, but finally the whole surface of the earth was so broken up by their borings, that every inch of ground contained several patches of eggs. This visitation was spread over many hundreds of miles.

Mr. S. H. Scudder exhibited two fossil insects from the coal-measures. One was the broken wing of a gigantic lace-winged fly, obtained at Morris, Illinois; the other an imperfect leg of a cricket, and a very small fragment of its wing from Northern Ohio. The peculiarity of the leg consisted in its having several prominences on the tibia, while the femur was smooth; the reverse is invariably the case among the living types.

*April* 15.—The President gave some results which he had reached in comparing a series of crania of wandering Tsuktshi from the Asiatic side of Behring's straits with those of Esquimaux and of Indians from Alaska, Puget's Sound, and California. The crania of the Tsuktshi were collected for the Smithsonian Institution by Mr. William H. Dall, a zealous naturalist attached to the exploring expedition under the direction of the Western Union Telegraph Company. It appears that the crania of the Tsuktshi and Esquimaux, which closely resemble each other in their strongly marked Mongolian features, differ materially both from the crania of the other races and from those of the Indians of Alaska, who



live in such close proximity to them. These comparisons sustain the view that the Esquimaux and Tsuktshi had a common origin, and the easy communication between the Asiatic and American Continents renders it all the more probable; a recent map, published by the Coast Survey, shows that the breadth of the straits at one point is less than fifty miles, while the Diomedé islands furnish a convenient resting-place midway between them.

Dr. C. T. Jackson called the attention of the Society to some of the modern methods for the preservation of wood. Mr. W. T. Brigham stated that foreign vessels entering the ports of China were attacked to a frightful degree by the teredo, while Chinese boats, although often made of the same wood, escaped. After vainly endeavoring to ascertain what preventive was used by the Chinese, he discovered the natives sprinkling tar on a fire beneath a vessel, and perceived a strong smell of creosote.

THE DANA NATURAL HISTORY SOCIETIES.—Seeing a small notice of some of the Dana Natural History Societies in your June number, I send you a brief account of the history of this organization. The chief object of this Society is to awaken and extend among the people generally, and especially among the women of our country, a greater love for the study of nature. The first Chapter with the name of the Dana Natural History Society was organized about a year ago, in Ripley Female College, Poultney, Vt., and since that time *eighteen* additional Chapters have been organized in different parts of the country. The following is a list of the various Chapters of the Dana Natural History Society, and their Corresponding Secretaries:

1. Ripley Chapter. Miss L. A. Plympton, Corresponding Secretary, Poultney, Vt.
2. Evanston Chapter. Miss Fannie Stout, Corresponding Secretary, Evanston, Illinois.
3. Rockford Chapter. Miss Ellen R. Shepherd, Corresponding Secretary, Rockford Seminary, Rockford, Ill.
4. Troy Chapter. Miss Myra Griswold, Corresponding Secretary, Willard Seminary, Troy, N. Y.
5. Greenwood Chapter. Miss Mary E. Cobb, Corresponding Secretary, Greenwood Seminary, West Brattleboro, Vt.
6. Tilden Chapter. Miss Augusta Robinson, Corresponding Secretary, Tilden Seminary, West Lebanon, N. H.
7. Maplewood Chapter. Miss Annie M. Bottom, Corresponding Secretary, Maplewood Institute, Pittsfield, Mass.
8. Raritan Chapter. Miss L. B. White, Corresponding Secretary, Matawan, Monmouth County, N. J.
9. Tappan Zee Chapter. Miss Louisa B. Hendrikse, Corresponding Secretary, Rockland Female Institute, Nyack, N. Y.
10. Chicago Chapter. Miss Alice Walbridge, Corresponding Secretary, Dearborn Seminary, Chicago, Ill.
11. Hyde Park Chapter. Miss H. L. Daniels, Corresponding Secretary, Hyde Park, Cook County, Ill.
12. Rockford Chapter. Miss Hattie Telfon, Corresponding Secretary, Miss Eastman's Seminary, Media, Penn.
13. Abbottsford Place Chapter. Miss Emma Judson, Corresponding Secretary, 1350 Pine street, Philadelphia.
14. Ionic Chapter. Miss J. C. Thompson, Corresponding Secretary, 608 Marshall street, Philadelphia.
15. Cuvier Chapter. Miss J. Pindell, Corresponding Secretary, Pittsburgh Female College Pittsburgh, Pa.

16. Iron City Chapter. Miss Helen M. Wellman, Corresponding Secretary, Pittsburgh, Pa.  
 17. Wheeling Chapter. Miss Lizzie Harbour, Corresponding Secretary, Wheeling, West Va.  
 18. Mount Holyoke Chapter. \*— —, Corresponding Secretary, Mount Holyoke Seminary, South Hadley, Mass.  
 19. Fort Edwards Chapter. \*— —, Corresponding Secretary, Fort Edwards Institute, Fort Edwards, N. Y.

The Raritan Chapter gave an evening entertainment that was highly appreciated by the audience, and realized them quite a handsome amount for their cabinet and library. We hope, and doubt not, that their efforts will result in a permanent benefit to the county and the cause of science.  
 —ADRIAN J. EBELL.

### ANSWERS TO CORRESPONDENTS.

A. T., Brookfield, Mo. — We will send you a collection of Eastern minerals and rock specimens in return for Western insects, and wasps' and bees' nests, etc.

J. L. B., West Nottingham, Md. — The plant is the *Chrysogonum Virginianum*.

A. S. N., Cleveland, O. — The insect you send is the larva of a bug, one of the *Pentatomata* group of the Hemiptera.

H. J. R., Cazenovia, N. Y. — The insects were *Membracis binotata* Say, a species of tree-hopper. Eastward it is found on *Celastrus scandens*.

"A Subscriber," and several other anonymous friends, as "S. H.," "X. Y. Z.," "N.," etc. — We cannot answer anonymous letters.

G. W. R., Hartford, Conn. — The Caterpillars you sent are the larvæ of a species of Saw-fly, which also attacks the pear trees in this vicinity. As the mature insect has not appeared, we cannot yet give you its name, but will do so if successful in rearing the caterpillar. It is not the common Pear-slug.

C. A. S., Grand Rapids, Mich. — The beetles (*Clytus*) which you found May 19th in the locust had evidently just changed from the pupa, and the white bands would have turned yellow on being exposed to the sunlight. They fly about in July, when they lay their eggs.

F. L., New York. — You can procure the publications of the Smithsonian Institution of B. Westermann & Co., 440 Broadway.

Mrs. K. N. D., Chicago. — Many thanks for your kindness.

R. C., St. Louis. — Mr. James Ridings, 518 South 13th street, Philadelphia, has Insect Pins for sale.

A. W. H., Ft. Madison. — The large spotted egg in the finch's nest was undoubtedly that of the Cowbird, or Cow Blackbird (*Molothrus pecoris*), which never builds a nest, but deposits its eggs in the nests of a good many species of small birds. It belongs to the family of Blackbirds (*Icteridae*).

D. P. W., Grantsville. — For notice of works on Taxidermy, see Vol. I. of *NATURALIST*, p. 160 and p. 321. There is also *Directions for Collecting and Preserving Birds*, by Mr. Holder, with several plates, in the fourth volume of the Illinois State Agricultural Transactions, p. 596, 1857-90. This last is the best article for a beginner we have seen published in this country.

J. L. S., Westchester. — For measuring eggs, you can get of any instrument maker a scale divided into inches and hundredths of an inch, to which two upright pieces are fixed, the one at the end being soldered to the scale, and the other movable, very similar to the measure used by a bootmaker in taking the size of a foot. By placing the egg against the upright piece at the end, and moving the other up to it, you will get the *exact* size of the egg indicated on your scale. Or, you can take a common rule and use two pieces of wood or card for the uprights; or you can get the size of the egg by dividers, and then measure the distance on a rule.

H. J. McL., Centralia, Kansas. — The bird you call a "Snipe" is the Long-billed Curlew, *Numenius longirostris* Wilson. Found in "the entire temperate regions of North America," Baird. It is one of the Snipe family. Your "Orange-head" is the Yellow-headed Blackbird, *Xanthocephalus icterocephalus* Baird, a true Blackbird. We shall print what you write about it.

Miss J. C., Meredith. — Money received and "Naturalist" forwarded as requested. Many thanks.

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\*Not having elected Corresponding Secretaries when I left them, I am unable to give their names at present.